Neighborhood Development Issues During Subdivision Plan Review

When the Planning Board reviews a subdivision plan, consider the following questions:

1. What is the character of the land to be developed? A Vicinity Map should be required that provides mapped information within ¼ mile or 1,000 feet around the proposed subdivision site. Information should include the natural resource features, especially surface and subsurface water areas, adjacent subdivisions, roads, wildlife areas, conservation areas, trails or paths for recreation, municipal water or sewer treatment systems, drainage systems. When reviewing the proposed plan look for connections with adjacent neighborhoods, unfragmented lands, recreational trails, wildlife habitats and corridors, scenic features and existing infrastructure.
2. What is the density being proposed? Is it consistent with the adopted Master Plan land use and density? Each type of land use and density generates a different type and amount of water runoff and traffic. You will need to understand those impacts.
3. What type of subdivision design will be used to create the neighborhood (e.g., conventional, traditional, open space conservation)? If possible, require traditional neighborhood planned development or open space conservation design for subdivisions that require a new road.
4. What setbacks are required for structures and septic systems from wetlands and waterways?
5. What are the estimated type and amount of trip traffic generated? Traffic generated by a particular use can be found in the Trip Generation Manual, published by the Institute for Transportation.
6. What pedestrian walkways, sidewalks, paths, and crosswalks, bike routes, multi–use paths, and links to bus stops are provided?
7. What will be the drainage and erosion control plan?
8. What provisions will be made to capture and reclaim water runoff?
9. Are water retention areas provided?
10. What covenants or restrictions will be included in the deed limiting fertilizer or pesticide use?

The following Best Management Practices can reduce nonpoint source water pollution from existing neighborhood areas:

- *Use vegetation extensively to filter runoff before it enters surface water bodies.*
- *Divert runoff around sites where pollutants could be picked up by surface flow (e.g. gas stations)*
- *Inspect areas periodically to make sure that potential pollutants, such as paint or car oil are not left in areas where they can be transported by runoff into water bodies.*
- *Keep parking areas, outdoor storage areas, and streets clean of debris. Street sweeping can be used to remove sediment, debris and trash from streets and parking areas.*
- *Clean out catch basins and other flow control devices regularly to prevent backup and overflow of sediments and pollutants.*

NH Department of Environmental Services, *Best Management Practices to Control Nonpoint Source Pollution*

Improving Neighborhood Development Protects Water Quality Too!

Neighborhoods are the building blocks of quality communities.

Neighborhoods can be developed to meet needs for water quality protection, wildlife habitat protection, and sustainable development.

Better neighborhoods are based on adopted Master Plan policies and implementation strategies.

Better neighborhoods require effective zoning ordinances and subdivision regulations to promote excellence in design and development.

Better neighborhood development strategies include:

Residential or mixed land use zoning districts with densities and intensities of uses balanced with natural resources protection.

Adequate public facilities ordinance. Capital Improvement Program and Impact Fee Ordinance. Vicinity Map required for subdivision review.

Best Management Practices to control nonpoint source water pollution in Subdivision Design and Site Development.

Strafford
REGIONAL PLANNING
COMMISSION

2 RIDGE STREET • SUITE 4
DOVER, NH 03820-2505

TELEPHONE: 603.742.2523
FAX: 603.742.7980
E-MAIL: SRPC@STRAFFORD.ORG

WWW.STRAFFORD.ORG

Strafford
REGIONAL PLANNING
COMMISSION

HOW TO Planning Series

Improve Neighborhood Design and Reduce Nonpoint Source Water Pollution

This document was funded by a grant from the New Hampshire Coastal Program with funding from the National Oceanic Atmospheric Administration.

Introduction

If we improve the process for how our neighborhoods are designed and developed, we can have a major impact on preventing nonpoint source water pollution and protecting water quality.

This Guide is intended for Planning Board members to help them understand how neighborhood planning and development can be improved to reduce nonpoint source water pollution. The Guide describes basic and traditional principles for neighborhood planning and development. It describes what Master Plan policies and implementation strategies can be incorporated into the planning process, including zoning and capital improvement programming. The Guide provides Planning Boards with ordinance and regulatory provisions that can be adopted and implemented, such as the use of vicinity maps, open space conservation subdivision design, and best management practices. The Guide describes how these improvement strategies can be effective in reducing nonpoint source water pollution.

Using the Guide will increase understanding, help implement the state and regional growth management principles, meet local public demand to protect water quality, and lead us toward sustainable development.



Table of Contents

Nonpoint Source Water Pollution – What is it?

When it rains or the snow melts, or land is irrigated, water flows over the land and through the ground. The water that flows off the land and into receiving waters is called runoff. As the water moves it can pick up and carry away natural and human made pollutants. Pollutants carried in the runoff are eventually deposited into wetlands, lakes, rivers, coastal waters, and underground drinking water sources. Scientists call this type of pollution nonpoint source because it does not have a single point of origin, nor is it introduced from a single outlet.

Pollutants can come from both air deposits and land uses. The source could be: soil erosion from construction sites; oil, grease, and toxic chemicals from driveways and roads; excess fertilizers and herbicides from lawns, golf courses, and parks; bacteria and nutrients from pet wastes and faulty septic systems.

Since the polluted runoff comes from a combination of what people do on the land, all of us are part of the problem, and the solution.

Traditional Neighborhoods Surrounding Mills

Sprawl Development Pattern in Strafford Region

Design Concepts for Main Street Neighborhood in Newmarket, NH

Emine Bilgili, Urban Designer, 1999

Neighborhood Design Principles

Designing a neighborhood to achieve multiple goals including preventing nonpoint source water pollution begins with basic "traditional" neighborhood design principles as follows:

1. Walkable Size: The neighborhood area should be a distance that a person can walk in a 10 to 15 minute period. Typically this is a quarter mile or about 1,000 feet radius from the neighborhood's center.
2. Central Public Facility: Within the ½ mile circular neighborhood area, a central public neighborhood facility or gathering place (e.g., neighborhood park or meeting hall) should be located. Also, depending on the number of people living in the neighborhood, there might be a school, library, or neighborhood service businesses.
3. Housing Variety: The neighborhood should feature a variety of housing types ranging from dwelling units above first floor neighborhood service business uses, multi-family dwelling units, duplexes and single family residences. These housing types would enable people with varying needs and incomes to live in the same neighborhood. Also, this housing may have varying lot sizes and setbacks depending on the overall design.
4. Residential Sidewalks and Paths: The streets should have sidewalks separated from the street so people can walk safely. When a neighborhood is more rural, sidewalks are, also, replaced with paths that meander away from the road for safe walking. Also a key feature along the sidewalks and paths are trees and shrubbery to physically and visually separate the pedestrians from vehicles, as well as provide shade and a more comfortable walking space.
5. Residential Streets: The roads serving the neighborhood homes should be designed to accommodate cars at speeds less than 25 mph, but not to enable traffic to cut through neighborhoods and jeopardize neighborhood child and adult safety.
6. Parks and Open Space: The entire neighborhood should be designed based on natural resource considerations including: water, soil, topography, vegetation, wildlife habitat. Protecting or conserving natural features is critical to preserve valuable lands for food production, to protect water quality, but also to protect scenic views and cultural features of the landscape.
7. Connectivity: The parks and open spaces should be linked so people could walk or ride a bike safely to the neighborhood center or school. It also allows for streams to flow naturally and for wildlife to move from place to place.
8. Human Scale: In addition to walkable considerations, development should be at a scale (e.g., height, width, length or bulk) that blends in with the overall character and appearance of the neighborhood. Architecture of the homes, the streetscape, and landscape are very important, not only for function, but for health and aesthetic benefits.
9. Workability: In addition to just providing housing, neighborhoods, either on their own or in conjunction with other neighborhoods, were to provide employment opportunities. This may be accomplished by providing space for neighborhood or broader community service businesses. Typically these businesses were located at the neighborhood's center or at the neighborhood's edge where an area converged or overlapped with other neighborhoods to create a village, town or city center. This design feature created opportunities so residents could either walk to work, or easily gather at convenient locations to access public transportation.

Vision 2020

A New Hampshire regional community committed to responsible growth and cooperative actions to improve our quality of life.

We celebrate and enhance our enterprising spirit; our historic buildings and evolving patterns of development; our scenic landscape of rivers, lakes, forests, and farmlands; and our cultural values for the benefit of future generations.

Use of Neighborhood Design Principles

Despite the successful use of these traditional design principles by private developers, many neighborhood subdivisions and developments have not followed them. In part this was due to increased automobile use, public subsidy of highways, lower land costs in outlying areas, and changing views on protection of natural resources and topographic features. In fact, sprawling neighborhoods became the accepted norm.

However, in recent years citizens, developers and public officials have recognized the benefits of the traditional neighborhood design principles. Planning Boards have begun to incorporate these design principles into ordinance and subdivision regulations known as: *planned unit developments, open space conservation subdivisions, cluster developments, traditional neighborhood design, village plan alternative subdivision*, or *new urbanism design.*

Whatever they are called, all are based on the traditional neighborhood design principles and the patterns of traditional New Hampshire villages and towns. Their use today, as in the past, can significantly reduce nonpoint source water pollution.

State and Regional Planning Policies Support Traditional Neighborhood Development

Due to the many benefits deriving from traditional neighborhood development, including water resource protection, New Hampshire's and Strafford Regional Planning Commission's Vision and Growth Management principles promote improved neighborhood development with the following adopted policies:

1. Maintain traditional compact settlement patterns to efficiently use land, resources, and investments in infrastructure.

2. Protect the traditional character of Strafford Region's downtowns, villages, and neighborhoods by encouraging historic/traditional New England styled architecture and a human scale of development that is comfortable for pedestrians and conducive to community life.

3. Incorporate a mix of uses to provide a variety of housing, employment, shopping, services, and social opportunities for all members of the community.

4. Protect environmental quality by minimizing impacts from human activities and planning for and maintaining natural areas and water resources that contribute to the health and quality of life of communities and people in the Strafford Region.

Strafford Regional Master Plan Land Use Policies

Quality Community Areas
Municipal service areas to accommodate new growth

Neighborhoods
Walkable residential areas within ¼ mile from a Neighborhood Center and linked to adjacent neighborhoods or the town center by separated pedestrian paths, bike routes and roadways.

Planned, mixed-use Neighborhood Center with neighborhood services and a square or park.

Provisions for affordable workforce housing.

Open Space Conservation Subdivisions.

Quality Development
Reflects traditional New Hampshire architecture and character.

Promotes economic development, especially tourism, while using low impact design and Best Management Practices.

Adopted May 26, 2005
Strafford Regional Planning Commission

Improved Neighborhood Development Benefits Communities

How neighborhoods are developed has a major impact on the physical, environmental, social, economic, and financial factors, including protecting water resources. Implementing traditional neighborhood design principles can have the following general benefits:

Economic Benefits: 20 to 30% reduction in municipal operating expenses.

Social Benefits: Increased citizen participation in community service and cultural activities.

Physical Benefits: Less land alteration, less impervious coverage, fewer roads, less infrastructure, less air pollution, improved opportunities for public transit.

Traditional Neighborhood Design Reduces Nonpoint Source Pollution

With local implementation of smart growth and growth management policies and the use of traditional neighborhood design principles, nonpoint source water pollution can be reduced.

1. Less grading and disturbance of the original site.
2. Less erosion.
3. Less impervious lot coverage from roads, driveways, and buildings and structures.
4. Less reliance on vehicle trips. More reliance on walking, biking and public transportation.
5. Less water runoff equals more water recharge.
6. Less cost.
7. Less environmental damage.

How neighborhoods are developed has a major impact on water quality. Nonpoint source water pollution is widespread because it can occur any time activities disturb the land or water. Careless or uninformed household management also can contribute to nonpoint source pollution problems.

"A one acre parking lot generates 16 times more polluted runoff than a meadow. This runoff washes toxic chemicals and other pollutants into our waters, lakes, and coastal areas, making them unfit for the wildlife that depend on them and the families who want to enjoy them."

(United States Environmental Protection Agency)